

Asking the Right Questions



Watershed Resources Fact Sheet Series

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Raising the Issue of Stormwater at a Public Meeting

The best way to protect your local waters from stormwater is to make the issue part of your community's land use regulation process. In most communities, stormwater regulation is done through planning and zoning boards.

Public commission meetings are where concerned individuals can raise important environmental issues for proposed developments. By asking a few simple questions, you can ensure that the proper authorities duly consider water quality impacts.

The Problem

Development brings more impervious surfaces—parking lots, roads, roofs and compacted soils—that lead to a number of changes, including:

- * increased volume and velocity of stormwater runoff;
- * increased frequency and severity of flooding;
- * peak or storm flows many times greater than in natural basins;
- * loss of natural runoff storage capacity in vegetation, wetlands and soil;
- * reduced groundwater recharge; and
- * decreased *base flow*, the groundwater contribution to stream flow.

These changes damage natural systems, infrastructure (roads, pipes and bridges) and personal property. When stormwater flows into streams, over land or through stormwater systems, the natural stream can't handle the excess volume. As a result, streams become deeper, wider and straighter (see *Fact Sheet #3: Impacts of Development on Waterways*).

Water quality is greatly influenced by land use. Stormwater runoff carries contaminants such as pathogens, nutrients, sediment, toxic materials and debris from the land to your local waterways. This is known as polluted runoff or nonpoint source water pollution (see *Fact Sheet #2: Nonpoint Source Water Pollution*).

Municipal land use policies can have a great impact on the health of local waterways. Land use decisions are often made on a case-by-case basis, so examine each individual development proposal.

Questions to Ask

When development is proposed in your community, it is important to ask questions about the water quality and quantity aspects of that project. Don't be afraid to ask questions—the land use regulatory system was set up specifically to allow you to participate in the process, whether as a planning and zoning board member or as an interested citizen. Don't let a lack of expertise in stormwater engineering keep you from exercising that right. Asking questions won't necessarily stop additional stormwater runoff, but at least you can ensure that the issue will be put on the table for discussion.

RIVERS AND STREAMS connect communities and landscapes into watersheds. This series of fact sheets is designed to help you address the effects of development on our water resources and learn the steps communities can take to reduce those impacts. Communities are affected by the activities of their neighbors—upstream or downstream, uphill or downhill—in a common watershed. Working together, watershed neighbors can find solutions to work for everyone.



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Each proposal is different, but there are some basic water quality considerations to take into account. Until you hear otherwise, don't assume that the applicant or the commission has addressed these concerns.

Here are some basic questions to ask about a proposed development and its possible effects on your community's water resources. They are organized according to the three-tiered strategy of **natural resource-based planning, environmentally sound site design** and **use of best management practices** (see *Fact Sheet #4: Strategies for Coping with Stormwater*).

Avoiding Impacts Through Natural Resource-based Planning

1. Have community plans been developed to address watershed management? Has the community completed a natural resource inventory?
2. Where is the project located with respect to the community's water resources? What is the current health of the development's watershed? Are there existing problems with water quality, biological health or flooding or other stormwater concerns?
3. Have natural resource implications of the project and any proposed zoning change been considered? Does the proposed development encroach upon, or through its stormwater runoff, affect any recognized priority natural resource areas (such as wetlands, watercourses, aquifer recharge areas, wildlife areas or dedicated open space)?

Minimizing Impacts Through Sensitive Site Design

1. Is the natural topography and drainage system retained, or is the stormwater collected and piped off-site? Consider vegetated swales as an alternative to traditional curbs and gutters. Where will the stormwater runoff ultimately be discharged? Does it go directly into any wetlands or watercourses?
2. Is natural vegetation retained wherever possible?
3. Does the design minimize disturbance of water resources (i.e., road and driveway crossings and bridges, piped or channelized sections)?
4. Are impervious areas minimized? Are parking and other paved areas larger than truly needed? Have pavement alternatives (concrete latticework, pervious pavement, crushed stone) been considered for use in low traffic areas?
5. Are wetlands or watercourses insulated from the development through buffer strips of wooded corridors?
6. Is the project within any setback or buffer zone around wetlands and watercourses where certain types of development or activities are restricted? If so, who will be charged with enforcing the restrictions? Will signs be posted to inform residents and owners of the restrictions?

Mitigating Impacts Through Best Management Practices (BMPs)

1. What erosion prevention and sediment control measures will be used during the construction phase? Who will make sure that they are effective?
2. Will stormwater be contained on site or will it be allowed off site?
3. How is the stormwater runoff going to be treated? What best management practices (such as oil and grit separators or detention ponds) will be used? What pollutants are the BMPs designed to remove? What volume of water are they designed to hold or treat?
4. Who will maintain the best management practices and how often? What is the life span of the practices?